

# Riding the Digital Explosion

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# Internet Evolution on Steroids

- ◊ 1990 Messaging (mail, netnews) but wanted searchable archives
- ◊ 1991 DB systems (WAIS) but wanted browsing
- ◊ 1992 Browsing & DB (Gopher) but wanted richer presentation
- ◊ 1993 Hypertext & DB (Web) but wanted programmable UI
- ◊ 1995 Mobile code (Java?) but...

**Constant need:**  
**Access to useful data viewable multiple systems**

# The Future of Information Technology

- ◊ Digital
- ◊ Personal
- ◊ Ubiquitous
- ◊ Multimedia: text ->video

# Communications Revolution: Digital Data

- ◊ Today the Internet:
  - Consumer: 14kb/sec
  - Professional: 56kb-1mb/sec
- ◊ Tomorrow:
  - Cable: 100mb/sec
  - CamCorders: 100kb/sec
  - Satellite Dishes: Xgb/sec

# Computer Revolution

- ◊ Today: desktop workstations,  
super mainframes
- ◊ Tomorrow: ubiquitous  
communications

# Data Revolution

- ◊ Today: newspapers, 100 channels of TV
- ◊ Tomorrow: merging TV, Telephone, and Databases
- ◊ Everyone is a publisher

# Making sense of it all

- ◊ Internal coordination
- ◊ Using external sources: standards standards

# Coming Problems

- ◊ Proprietary vs. open systems
- ◊ Infotainment -> Productivity tool
  - Cross server navigation: 52k is too many
  - Personalization through profiling
  - Packaged delivery using “agents”

# Proprietary Services of Past (and Future?)

IPs

IPs

IPs



Prodigy Compuserve AOL

◊ Proprietary and Exclusive

# Maturing Open Model

IPs

IPs

IPs

Publishing  
Billing  
Security  
Browser  
Transport

AOL users

MSN users

??? users

- ◊ Customer Services Adds Value
- ◊ IPs get maximum distribution



## Sample Personal Paper

# # WAISagent

From WAIS Inc.

Tuesday, April 18, 1995



Online Publishing

Electronic Publishing

Media - Publishing

Interactive/Online Services

Internet



Wall Street Journal

Front Page

Market Place Front Page

Technology

Editorial Stories



Buyer-seller relationship strengthened through interactive media

Central Newspapers - Russell -2-: Will Remain Director >ECP

Central Newspapers Decl 14c Class A Regular Qtrly Div >ECP

DISNEY, AMERITECH, BELLSOUTH AND SBC LAUNCH HOME ENTERTAINMENT PARTNERSHIP

DISNEY, AMERITECH, BELLSOUTH AND SBC TO CONDUCT TELEPHONE PRESS CONFERENCE TODAY

DisneyBaby Bell Venture -2-: To Mkt Programming Nationwide

E-Mail Makes Inroads In Worker Communications

ENTERACTIVE ANNOUNCES CD-ROM PUBLISHING AGREEMENT WITH JEAN-MICHEL COUSTEAU



Current Events

Congress

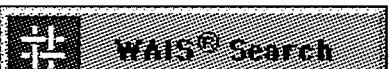
Supreme Court

Federal Trade Commission

Federal Communications



Personal Index



WAIS® Search



About WAIS

## GILS' Solution

- ◊ Put the government info into the open systems
- ◊ Don't invest in User Interface: make government databases available to all
- ◊ Post it once: HTTP, Gopher, Z39.50, Fax etc. from one DB
- ◊ Enable Active Clients: Towards Agents

# Interoperability with other Systems

- ◊ Web, Java...
- ◊ Online Services: AOL, Microsoft Network, etc.
- ◊ Lotus notes
- ◊ Cable systems
- ◊ ...

## Next Steps

- ◊ The Internet is winning against all competitors! but...
- ◊ Data is still inaccessible to most people
- ◊ Standards processes are still too slow

Lets create the future we want to live in.